

ENGINEERING CHANGE NOTICE
DART AEROSPACE LTD

Date: 08.03.03	Job No.: 00056	ADR Yes/No: N	ADR Date:	ECN #:	1135
Product No.: D212-682		Created By: <i>MP</i>	Approved By: <i>MP</i>		
Product Name: LANDING GEAR KITS		Checked By: <i>MP</i>	General Manager Approval:		

Distribution	Reqd	Resp	Received
Production Manager	X	LL	08/03/17
Production Engineering Coord	X	EC/DD	08/03/17
Director Quality Assurance			
Customer Order Processing	X	BG/SB	08/03/17-03-04

Distribution	Reqd	Resp	Received
Customer Technical Support	X	DStow	08-03-17
Marketing	X	SW	08-03-17

Reason for Change:

Add D412-682-001 Support Beam Kit and D412-682-111/-113/-115/-117 Landing Gear Kits

Documents Affected:

D212-682 Rev. D

#	Engineering Actions	Reqd	Resp	Notes	Complete
1	Required Documents/Drawings Under Review	N			08.03.17 <i>MP</i>
2	Update Blue/Pink/DSI Folder and Electronic Files	Y	KJ		08.03.17 <i>MP</i>
3	Update D-Part/M-Drawing/DSI/DEO Master Binders	Y	KJ		08.03.17 <i>MP</i>
4	Update Grey Project Binder	N			
5	Move Electronic Files	Y	KJ		08.03.14 <i>MP</i>
6	Update Master Document List (MDL)	N			
7	Update Document Record (DR)	N			
8	Create/Update Change Record Form	Y	KJ	For D412-682-001 only	08.03.17 <i>MP</i>
9	Create/Update PPP's	Y	KJ	For D412-682-001 only	08.03.17 <i>MP</i>
10	Update Controlled PDF Files	Y	KJ	As required	08.03.17 <i>MP</i>
11	Notify TC/FAA of Change	N			
12	Update QSI 021 and/or STC Approval List	N			
13	Update Product Development Summary	N			
14	Update Accpac Database	Y	KJ	As required	08.03.17 <i>MP</i>
15	Update Access (ARC) Database	Y	KJ	"NO DART ARC/C OF C REQUIRED"	08.03.17 <i>MP</i>
16	Update/Verify ARC	Y	KJ	FOR D412-682-001 <i>MP</i>	08.03.17 <i>MP</i>
17	Update Paperwork Kits in Production	N			
18	Update Qpulse/Laminated Dwgs	N			
19	Update Product Compatability Matrix	N			
20	Create Eurocopter Form (FEE)	N			
21					

#	Production Actions	Reqd	Resp	Notes	Complete
22	Create/Update Coss IPP/BOM	Y	EC/DD	Update as required - see below	08.03.02.05
23	Update FAI Sheets	N			
24	Create/Update CNC Programs	N			
25	Create/Update Tooling	N			
26	Red Tag Stock (Specify)	N			
27	Rework/Scrap Current Production and/or Stock	N			
28	Update Paperwork Kits in Stock	N			
29	Create/Update MPP	N			
30					

#	Quality Assurance Actions	Reqd	Resp	Notes	Complete
31	Notify Previous Customers	N			
32	Notify Eurocopter France	N			
33					

Description / Action:

Estimate should mention that original Bell ARC and Tags should be part of -001 kit

Peter Hum

From: Frank Mah [fmah@eaglecopters.com]
Sent: March 5, 2008 11:34 AM
To: 'Peter Hum'
Subject: RE: D212-682 Rev D - 412 rocker beam

Hi Peter,
412-050-003-109 is S/S to -111, .. S/S by -113 then S/S by 604-030-001 \$4,045.00 USD
412-050-008,101 is S/S 604-028-001 \$220.00USD

Regards,

Frank

-----Original Message-----

From: Peter Hum [mailto:phum@dartaero.com]
Sent: Wednesday, March 05, 2008 9:11 AM
To: 'Frank Mah'
Subject: FW: D212-682 Rev D - 412 rocker beam

Hi Frank,

Dart is beginning to offer the rocker beam (Bell 412) and bolt that assembles the rocker beam to the support on the Bell 412 aft crosstube.

David Shepherd recommended that I should ask you the reference AAI part numbers for the rocker beam and bolt. The Bell P/N's are:

- a) 412-050-003-109, Support Beam Assembly – older P/N's are 412-050-003-101, 412-050-003-105
- b) 412-050-008-101, Bolt

Thanks
Peter

From: David Shepherd [mailto:dshepherd@dartaero.com]
Sent: February 28, 2008 7:26 PM
To: 'Peter Hum'
Cc: 'Sian Willems'; 'Mike Petsche'; 'Leanne Elsliger'
Subject: D212-682 Rev D

Peter,

Comments as follows:

- a) AN320-8 is a castellated nut ... we should supply the cotter pin to complete this kit **DONE**
- b) We should reference AAI part numbers for rocker beam and bolt as options ... I am sure you can get this info from Frank Mah, if the part numbers exist **DONE**
- c) D412-682-111 should be D212-682-111 and D412-682-113 should be D212-682-113 ... catalogue is wrong. These kits don't get installed on 412. **DONE**

Sian,

Can you re-send me the catalogue notes we sent to DHS before I incorrectly hammer them for screwing up the part numbers on this.

I am fairly confident we wanted to change these part numbers, but would like to see the notes to verify.

LOW Landing Gear Kits - Low Standard

Crosstubes and Skidtubes

KEEP WITH ORIGINAL
ECN 1135

Helicopter pilots count on DART landing gear for a safe and secure landing anywhere – anytime.

DART skidtubes use Round-I-Beam™ technology, CNC-machined saddles and a cross bolt installation. The saddle locks into a key on the skidtubes to further distribute load. This design reduces the impact on the saddles and the crosstubes during hard landings by distributing the load over the entire landing gear, thus minimizing breakage.

DART landing gear provides the highest value, quality and durability available.

New
Low Gear
Now
Available



STANDARD LOW LANDING GEAR KITS

Approval	STC Number	A/C Approved	STC Description	
See landing gear component part numbers for associated approvals. New approvals are continually being added; if you do not see your required approval, contact your DART sales office.				
Part Number	Product Description		Kit Weight	Installation Time
D412-682-111	Landing Gear Kit, Standard (Low) 205/210/212/UH-1		147.0 lb / 66.8 kg	8 hrs
D412-682-113	Landing Gear Kit, Standard (Low) 204/UH-1		138.8 lb / 63.1 kg	8 hrs
D412-682-115	Landing Gear Kit, Standard (Low) 412		152.9 lb / 69.5 kg	8 hrs
D412-682-117	Landing Gear Kit, Low Narrow 412		151.0 lb / 68.6 kg	8 hrs
Part Number	Product Description	Special Comments	Aircraft Model	Price (USD)
D412-682-111	Landing Gear Kit, Standard (Low)	Kit includes D212-664-107 Fwd Crosstube, D212-664-207 Aft Crosstube & D205-634-011 LH & RH Skidtubes Price is for complete kit.	205/210/212/ 214/UH-1	Contact Sales
D412-682-113	Landing Gear Kit, Standard (Low)	Kit includes D212-664-107 Fwd Crosstube, D212-664-207 Aft Crosstube & D204-635-011 LH & RH Skidtubes Price is for complete kit.	204/UH-1	Contact Sales
D412-682-115	Landing Gear Kit, Standard (Low)	Kit includes D212-664-107 Fwd Crosstube, D212-664-209 Aft Crosstube & D205-634-011 LH & RH Skidtubes Price is for complete kit.	412	Contact Sales
D412-682-117	Landing Gear Kit, Low Narrow	Griffon CH-146 low narrow configuration. Kit includes D412-664-105 Fwd Crosstube, D412-664-205 Aft Crosstube & D205-634-011 LH & RH Skidtubes Price is for complete kit.	412	\$44,448

ECN 1135

Peter Hum

KEEP WITH ORIGINAL

From: Sian Willems [swillems@dart Aero.com]
Sent: February 12, 2008 1:04 PM
To: phum@dart Aero.com
Subject: FW: DART kit for the AAI rocker beam and bolt

Parts for D412-682-001:

- (1) AN320-8 nut
- (1) NAS1149F0832P washer
- (1) 412-050-008-101 bolt
- (1) 412-050-003-109 support beam assy

Sian Willems

Marketing
T - 1.613.632.5200
F - 1.613.632.1185
C - 1.613.676.0577
swillems@dart Aero.com
DART Aerospace Ltd.

No virus found in this incoming message.

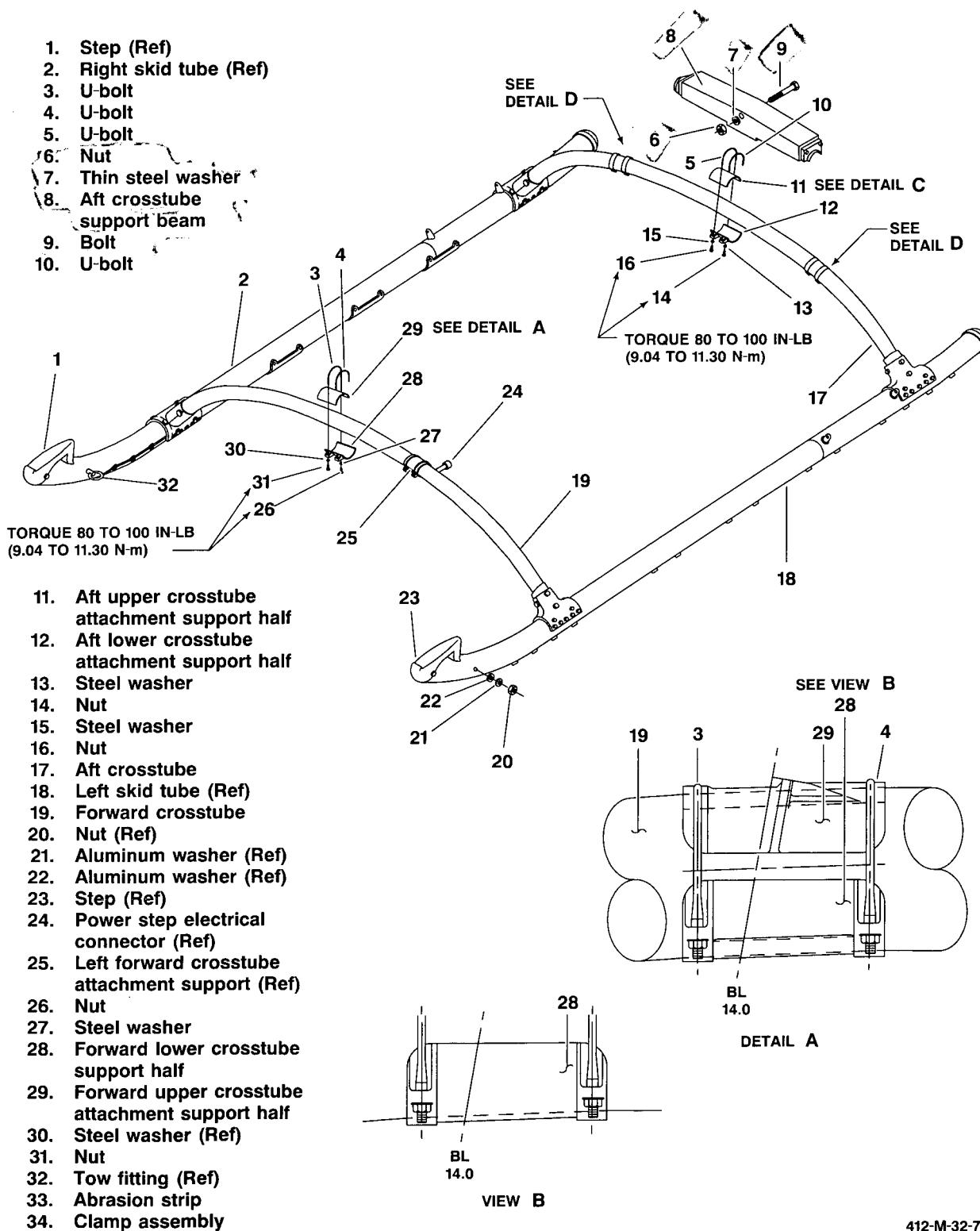
Checked by AVG Free Edition.

Version: 7.5.503 / Virus Database: 269.17.1/1182 - Release Date: 12/12/2007 11:29 AM

No virus found in this outgoing message.

Checked by AVG Free Edition.

Version: 7.5.516 / Virus Database: 269.20.2/1273 - Release Date: 12/02/2008 9:31 AM



412-M-32-7-1

Figure 32-7. Landing Gear Assembly (Sheet 1 of 2)

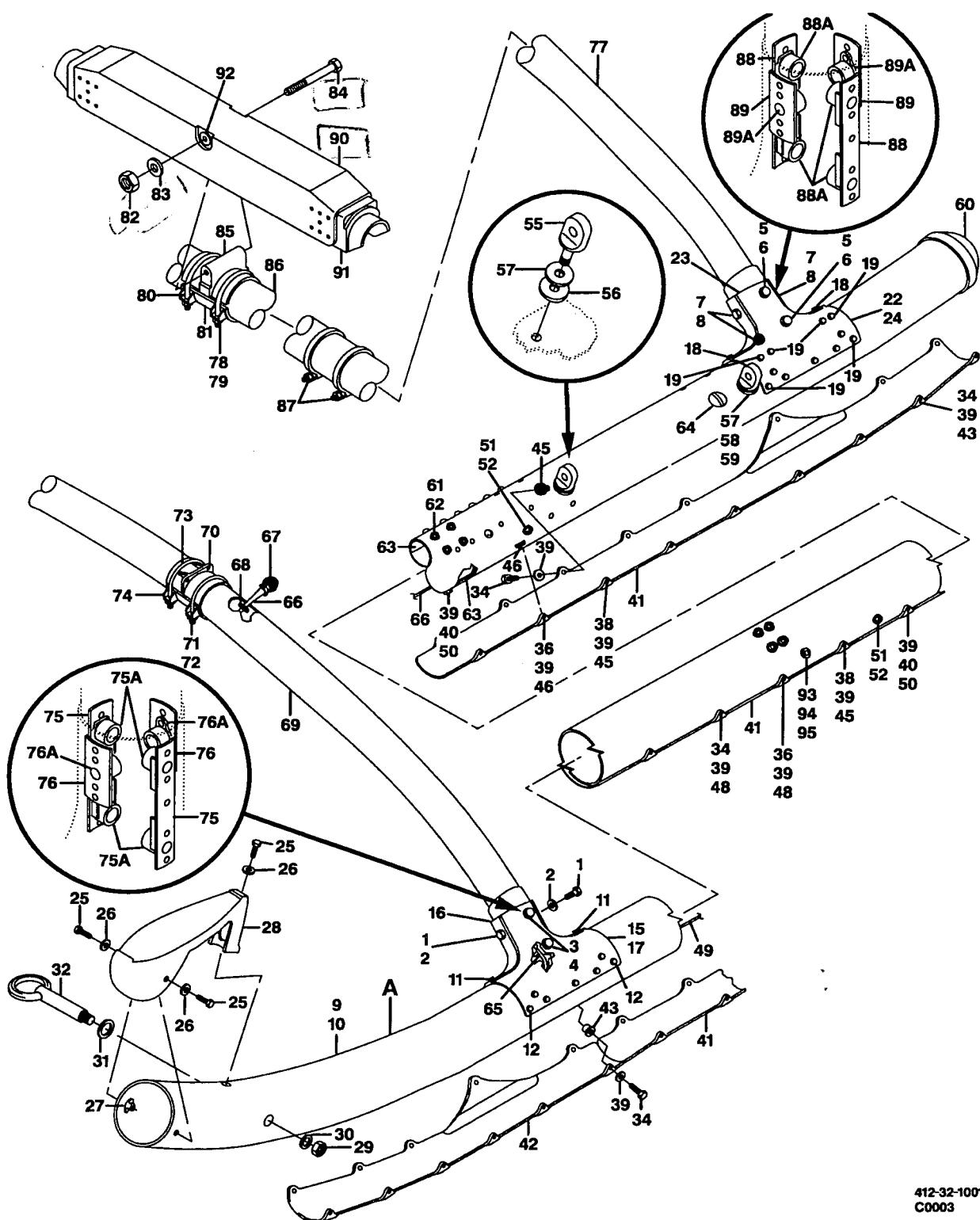


Figure 32-1. Standard skid gear kit (Sheet 1 of 2)

412-32-1001-1
C0003

D412-632-001

(1) INDEX NUMBER	(2) PART NUMBER	(3) ITEM NAME	(4) UNIT PER ASSY	(5) A V A I L	(6) U O C
		FIGURE: 32-1. Standard skid gear kit (Cont'd)			
72	AN960-416	... WASHER (REPLACED BY NAS1149F0463P)	8	1	
72	NAS1149F0463P	... WASHER (REPLACES AN960-416)	8		
73	205-050-134-001	... U-BOLT	4	1	
74	205-050-133-001	... SUPPORT (USBL ON 205-050-400-055)	2	1	
74	206-050-301-109	... STRIP, ABRASION (USBL ON 412-050-040-101)	2		
75	90-018-1	... RADIUS BLOCK ASSY	4	1	
75A	MS21051L6	... NUTPLATE	2		
76	90-019-2	... RADIUS BLOCK ASSY	4	1	
76A	MS21069L6	... NUTPLATE	1		
77	412-050-002-101	... CROSSTUBE ASSY, AFT (USBL ON 412-050-001-101) (REPLACED BY 412-050-002-103, -105 AND -107)	1		
77	412-050-002-103	... CROSSTUBE ASSY, AFT (USBL ON 412-050-001-101 AND -103) (REPLACES 412-050-002-101) (REPLACED BY 412-050-002-105 AND -107)	1		
77	412-050-002-105	... CROSSTUBE ASSY, AFT (USBL ON 412-050-001-101, -103 AND -105) (REPLACES 412-050-002-101 AND 103) (REPLACED BY 412-050-002-107)	1		
77	412-050-002-107	... CROSSTUBE ASSY, AFT (REPLACES 412-050-002-101, -103 AND -105) (REPLACED BY 412-050-041-101)	1		
78	MS21042L4	... NUT	4	1	
79	AN960-416	... WASHER (REPLACED BY NAS1149F0463P)	4	1	
79	NAS1149F0463P	... WASHER (REPLACES AN960-416)	4		
80	214-052-008-101	... U-BOLT	2	1	
81	412-050-007-101	... SUPPORT	1	1	
82	AN320-8	... NUT	1	1	
83	AN960-816L	... WASHER (REPLACED BY NAS1149F0832P)	1		
83	NAS1149F0832P	... WASHER (REPLACES AN960-816L)	1		
84	412-050-008-101	... BOLT	1	1	
85	412-050-006-101	... SUPPORT	1	1	
86	412-050-009-101	... CROSSTUBE ASSY (USBL ON 412-050-002-101) (REPLACED BY 412-050-009-107 AND -111)	1		
86	412-050-009-107	... CROSSTUBE ASSY (USBL ON 412-050-002-101, -103 . . . AND -105) (REPLACES 412-050-009-101) (REPLACED BY 412-050-009-107)	1		
86	412-050-009-111	... CROSSTUBE ASSY (REPLACES 412-050-009-101 AND . . . -107)	1	1	
87	330C400-331S	... CLAMP (REPLACED BY 330C400-331-S)	2		
87	330C400-331-S	... CLAMP (REPLACES 330C400-331S)	2		
88	90-018-1	... RADIUS BLOCK ASSY	4	1	
88A	MS21051L6	... NUTPLATE	2		
89	90-019-1	... RADIUS BLOCK ASSY	4	1	
89A	MS21069L6	... NUTPLATE	1		
90	412-050-003-101	... SUPPORT BEAM ASSY (USBL ON 412-050-002-101 AND . . . -103) (REPLACED BY 412-050-003-105 AND -109)	1		
90	412-050-003-105	... SUPPORT BEAM ASSY (USBL ON 412-050-002-101, . . . -103 AND -105) (REPLACES 412-050-003-101) (REPLACED BY 412-050-003-109)	1	1	
90	412-050-003-109	... SUPPORT BEAM ASSY (REPLACES 412-050-003-101 . . . AND -105)	1	1	
91	412-050-005-101	... SUPPORT	2	1	

(1) INDEX NUMBER	(2) PART NUMBER	(3) ITEM NAME	(4) UNIT PER ASSY	(5) A V A L	(6) U O C
		<p>FIGURE: 32-1. Standard skid gear kit (Cont'd)</p> <p>92 22-012B39-33-28 BUSHING 93 NAS42DD3-16 SPACER 94 140-009C7T40 WASHER 95 140-009D7T24 WASHER</p> <p>NOTE 1: FOR SPARE PART REPLACEMENT USE 205-050-400-101 TO REPLACE 204-050-107 -011 AND -013 AS A UNIT</p> <p>NOTE 2: FOR SPARE PART REPLACEMENT USE 205-050-400-103 TO REPLACE 205-050-107 -101 AND -103 AS A UNIT</p> <p>NOTE 3: REPLACE AS A SET ONLY.</p>		2 2 2 2	1 1 1 1